CLAIMS

What is claimed is:

1   1.   A method for determining whether an radio frequency identification device is detected,

2   the method comprising:

3   selecting a plurality of different antenna patterns from a predetermined multiplicity of

4   antenna patterns;

5   determining a plurality of binary results each responsive to whether a respective

6   communication link provides a respective signal having a respective amplitude exceeding a

7   respective threshold, each communication link operative in accordance with at least one of the

8   selected antenna patterns;

9   selecting, from a plurality of predetermined methods, a method for forming a logical

10   combination; and

11   determining that the radio frequency identification device is detected in accordance with

12   performing the method to form a logical combination in accordance with the plurality of binary

13   results.

1   2.   The method of claim 1 wherein the first threshold is equal to the second threshold.

1   3.   The method of claim 1 wherein at least one of the respective communication links

2   comprises:

3   a.   a receiver; and

4   b.   an antenna coupled to the receiver, wherein the antenna and the receiver

5   cooperate in accordance with the respective antenna pattern.

1   4.   The method of claim 1 wherein at least one of the respective communication links

2   comprises:

3   a.   a transmitter; and

4   b.   an antenna coupled to the transmitter, wherein the antenna and the

5   transmitter cooperate in accordance with the respective antenna pattern.

1   5.   The method of claim 1 wherein each selected antenna pattern has a different

2   polarization.

1   6.   The method of claim 1 wherein each selected antenna pattern has a different direction of

2   maximum effectiveness as an antenna.

3   7.   The method of claim 1 wherein at least one of the predetermined methods provides the

4   logical combination in accordance with a logical OR of at least two of the plurality of binary

5   results.

1   8.   The method of claim 1 wherein at least one of the predetermined methods provides the

2   logical combination in accordance with a logical AND of at least two of the plurality of binary

3   results.

1   9.   The method of claim 1 wherein R1, R2, R3, and R4 represent four results of the plurality

2   of binary results, at least one of the predetermined methods provides the logical combination in

3   accordance with the logical expression: (R1 OR R2) AND (R3 OR R4).

1   10.   The method of claim 1 wherein R1, R2, R3, and R4 represent four results of the plurality

2   of binary results, at least one of the predetermined methods provides the logical combination in

3   accordance with the logical expression: (R1 AND R2) OR (R3 AND R4).

1   11.   The method of claim 1 wherein at least one of the predetermined methods provides the

2   logical combination in accordance with whether a sum of the plurality of binary results exceeds a

3   predetermined quantity.